View metadata, citation and similar papers at core.ac.uk

brought to you by CORE

provided by Elsevier - Publisher Connector

ACC.14
TCT@ACC-i2 | innovation in intervention

A910
JACC April 1, 2014
Volume 63, Issue 12

Heart Failure and Cardiomyopathies

RIGHT VENTRICULAR STROKE WORK INDEX AS PROGNOSTIC INDICATOR FOR POST-PROCEDURAL MORBIDITY AND 1-YEAR MORTALITY IN PATIENTS UNDERGOING TRANSCATHETER AORTIC VALVE REPLACEMENT

Poster Contributions
Hall C
Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Approaches to Advanced Heart Failure: From VAD, Transplant, Palliative Care to New Perctutaneous Therapies
Abstract Category: 12. Heart Failure and Cardiomyopathies: Clinical
Presentation Number: 1221-197

Authors: *Ryan K. Kaple, Muhammad A. Haider, Matthew S. Schoenfeld, Sumeet Pawar, Polydoros Kampaktsis, Sean Wilson, Luke Kim, Dmitriy Feldman, Rajesh Swaminathan, Geoffrey Bergman, Robert Minutello, Richard Devereux, Arash Salemi, Karl Krieger, Evelyn Horn, Harsimran Singh, Shing-Chiu Wong, Fay Lin, New York Presbyterian Hospital - Weill Cornell, New York, NY, USA*

Background: Compromised right ventricular function as defined by depressed right ventricular stroke work index (RVSWI) increases morbidity after cardiac surgery. The prevalence and impact of preoperative RVSWI on morbidity and mortality after transcatheter aortic valve replacement (TAVR) is unknown.

Methods: We compared post-procedural morbidity and 1-year mortality among 196 consecutive patients undergoing TAVR at a single center from 4/2009 - 4/2013 with RVSWI < 450 mmHg*ml/m2 to those with normal RVSWI. Post-procedural morbidity was evaluated by: duration of intubation, ICU and hospital length of stay. Subgroup analysis was limited to those with concurrent pulmonary hypertension (PH), defined by mean pulmonary artery pressure < 25 mmHg.

Results: 146 patients had sufficient data to calculate RVSWI (age 86 ±9, female 55 %, transfemoral access 61%, left ventricular ejection fraction 50 ±14%, PH 66%) with a mean follow up of 1.1 ± 0.8 years. Baseline characteristics were similar between groups, including severity of mitral regurgitation. The prevalence of RVSWI < 450 was 23% overall: 14% in those with PH, 41% in those without PH (p < 0.001). There was no statistically significant difference in intubation time, ICU or hospital length of stay, or 1-year mortality between RVSWI groups regardless of the presence of PH (p= NS for all, Table).

Conclusion: Depressed RVSWI is common among patients undergoing TAVR, but does not impact post-procedural morbidity or 1-year mortality in patients undergoing TAVR.

	RVSWI <450 mmHg*ml/m²		RVSWI > 450 mmHg*ml/m²		p	
	Overall (n= 33)	PH (n= 12)	Overall (n=113)	PH (n=84)	Overall	PH
Intubation time (h)	21 (26)	26 (40)	19 (17)	26 (40)	0.58	0.46
ICU stay (h)	78 (52)	81(62)	106 (104)	107 (95)	0.13	0.35
Time to discharge (d)	6.7 (3.4)	7.3 (4.1)	9.4 (9.7)	9.7 (10.7)	0.12	0.46
1-year mortality	9.1%	11.1%	21.5%	22.6%	0.13	0.67